

Application Serial No. 10/585,477
Reply to Office Action of May 24, 2010

PATENT
Docket: CU-4938

RECEIVED
CENTRAL FAX CENTER

AUG 23 2010

Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1. (currently amended) A wire material used to form ~~[[for]]~~ a coil expander used for a coil expander, the coil expander is used for ~~[[of]]~~ a combination piston ring comprising a piston ring and the coil expander for pressing and urging the piston ring outward in the radial direction thereof, wherein a cross-sectional shape of the coil expander formed by using the wire material ~~thereof~~ is a rectangular shape with four flat surfaces, ~~[[and]]~~ a cross-sectional shape of the wire material is a rectangular shape with a convex curved surface at the longer side of the rectangular cross section, and when the coil expander is formed by coiling using the wire material ~~for a coil expander~~, the convex curved surface of the wire material is deformed to be a flat surface ~~for a coil expander~~, constituting an outer peripheral surface of the coil expander, ~~is formed into a convex curved shape.~~
2. (currently amended) The wire material ~~for a coil expander~~ according to claim 1, wherein the height₁ ~~of the curved surface~~ in the surface of the wire material₁ ~~for a coil expander, which is formed into~~ of the convex curved surface ~~[[.]]~~ is in a range of 0.03 to 0.1 mm.
3. (currently amended) The wire material ~~for a coil expander~~ according to claim 1, wherein, the wire material includes a concave curved surface at the longer side of the rectangular cross section, and when the coil expander is formed by coiling using the wire material ~~for a coil expander~~, the concave curved surface of the wire material ~~for a coil expander~~, is deformed to be a flat surface constituting an inner peripheral surface of the coil expander, ~~is formed into a concave curved shape.~~

Application Serial No. 10/585,477
Reply to Office Action of May 24, 2010

PATENT
Docket: CU-4938

4. (currently amended) The wire material ~~for a coil expander~~ according to claim 3, wherein, when the height ~~of the curved surface~~ in the surface of the wire material, ~~for a coil expander formed into~~ of the convex curved surface shape is "a" and the height ~~of the curved surface~~ in the surface of the wire material, ~~for a coil expander formed into~~ of the concave curved surface shape is "b", $a \geq b + 0.005 \text{ mm}$.

5. (currently amended) The wire material ~~for a coil expander~~ according to claim 1, wherein a radius of curvature of the convex curved surface ~~of outer periphery side surface edges~~, located at both ends in a width direction of the wire material, ~~for a coil expander, of the surface of the wire material for a coil expander formed into the convex curved shape~~ is smaller than the radius of curvature of the convex curved surface ~~of an outer periphery side surface~~ midportion located at the central portion in the width direction of the wire material ~~for a coil expander~~.

6. (currently amended) The wire material ~~for a coil expander~~ according to claim 3, wherein a radius of curvature of the concave curved surface ~~of inner periphery side surface edges~~, located at both ends in a width direction of the wire material, ~~for a coil expander, of the surface of the wire material for a coil expander formed into the concave curved shape~~ is smaller than the radius of curvature of the concave curved surface ~~of an inner periphery side surface~~ midportion located at the central portion in the width direction of the wire material ~~for a coil expander~~.

7. (currently amended) The wire material ~~for a coil expander~~ according to claim 1, wherein a cross-sectional shape side surface of the wire material is rectangular shape with flat surfaces at the shorter sides of the rectangular cross section ~~for a coil expander is flat~~.

Application Serial No. 10/585,477
Reply to Office Action of May 24, 2010

PATENT
Docket: CU-4938

8. (currently amended) The wire material ~~for a coil expander~~ according to claim 1, wherein the coil expander formed by coiling the wire material is used for a combination oil ring ~~the piston ring is an oil ring~~.

9. (currently amended) The wire material ~~for a coil expander~~ according to claim 1, wherein the wire material ~~for a coil expander~~ is formed of a shape memory alloy.

10. (currently amended) A coil expander, wherein the wire material ~~for a coil expander~~ according to claim 1 is used to form the coil expander.

11. (cancelled)

12. (currently amended) The coil expander according to claim ~~[[11]]~~ 10, wherein the outer peripheral surface of the coil expander is a plasticity processed surface.